A Blind, Painful Eye: Phacolytic Uveitis and Phthisis Bulbi

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Abstract: A 55 year-old Hispanic Female with a history of long-standing blindness in the right eye secondary to a traumatic retinal detachment and resulting hypermature cataract presents with phacolytic uveitis and early phthisis bulbi.

Outline

I. Case History

- Patient demographics: 55 YO Hispanic Female
- Chief complaint: Severe pain and photophobia OD
- Ocular History: Traumatic retinal detachment and resulting hypermature cataract, late 1990's
- Medical History: (-)DM, HTN; Patient unaware of any systemic conditions
- Medications: Flonase for seasonal allergies

II. Pertinent findings

- BCVA: OD: NLP OS: 20/20-
- Externals:
  - Pupils:
    OD: no response to light, (+) Grade 4 APD OS: round, reactive to light
  - EOM's: full, smooth and comitant OU
  - Confrontation Visual Fields:
    OD: completely extinguished VF OS: FTFC
- Slit Lamp Exam (pertinent findings OD):
  - Cornea: Iridocorneal touch, mid-periphery to periphery 360
  - Iris: Posterior synechiae 360; Iris bowed, abutting cornea in periphery 360
  - Angle: Closed 360
  - Anterior Chamber: Very shallow, (+) Grade 1 cells
  - Lens: (+) Grade 4+ hypermature cataract
- Tonometry (GAT), at 18:21
  OD: 09mmHg OS: 16mmHg
- Gonioscopy:
  - OD: No structures seen 360, very bowed iris configuration, in apposition to cornea near angle
  - OS: Open to ciliary body 360, flat iris configuration
- DFE (OS): OD unable to view secondary to hypermature cataract
  - C/D: 0.40H/0.45V; Rim tissue healthy
  - Macula: Flat & intact
  - Vessels: Normal caliber; A/V 2:3
  - Periphery: flat and intact 360; no breaks
- Imaging Studies:
  - Anterior Segment OCT (OD): Complete Angle Closure, very bowed Iris; lens pushing iris towards angle
  - B-Scan Ultrasound (OD): Funnel retinal detachment, with abnormal forward displacement of lens

- Anterior Segment Photography (OD): Hypermature cataract and posterior synechiae visible

III. Differential diagnosis

- Primary/leading Diagnosis: Phacolytic uveitis OD
- Others: Ocular pain secondary to phthisis bulbi OD; Acute Angle Closure OD (Ruled out by low IOP, likely failure of ciliary body)

IV. Diagnosis and discussion

- Phacolytic Uveitis: Escape of lenticular contents into the anterior chamber through an intact, permeable lens capsule or through minute dehiscence in anterior lens capsule, resulting in uveitis and subsequent glaucoma. Spontaneous lens capsule rupture is extremely uncommon (Goel, N. 2015).
  - This case is unique in that phacolytic uveitis usually presents with elevated IOP and open angles. However, the patient presents with complete angle closure 360 and low IOP, suggestive of failure of the ciliary body.
  - Can present as acute without macrophages in the anterior chamber or gradual with phacolytic macrophages in the aqueous humor (Mavrakanas, M.D. et al 2012)
- Phthisis Bulbi as a differential: most common cause of pain in patients with blind eyes (Custer P.L. et al, 2000)
  - Most likely a secondary etiology for patient's ocular pain.

V. Treatment, management

- Durezol 0.05% 6x/day OD (for treatment of intraocular inflammation)
- Atropine 1% BID OD (for pain management. Low IOP indicates ciliary body failure; cycloplegic not contraindicated even though angle is closed)
- Referral to oculoplastics surgeon for enucleation
  - Enucleation recommended over evisceration due to Inability to see behind hypermature cataract to rule out comorbidity of ocular tumor (Pereira P.R. et al, 2006)
  - Cataract extraction contraindicated due to retinal detachment and poor post-operative acuity.

References:

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VI. Conclusion

- Phacolytic uveitis is not a commonly seen condition in first world countries due to prevalence and ease of cataract extraction.
- It is important to manage ocular pain for blind eyes and to consider the psychological consequences of enucleation.